

REMARKS

Claims 1-33 are pending in the application. No new matter has been added by way of amendment. As requested by the Examiner, the claims have been amended to incorporate reference to particular SEQ ID NOs to specifically define the first and second nucleotide sequences of the claims as well as the third nucleotide sequences of the claims. Reexamination and reconsideration of the claims are respectfully requested.

The Invention

The invention relates to compositions and methods for detoxification or degradation of fumonisin or AP1. The enzymes and nucleotide sequences of the present invention provide a means for continued catabolism of the fumonisin-degradation products obtained by degradation with other enzymes, such as, for example, previously-described carboxylesterase and amine oxidase enzymes.

As suggested by the Examiner, Applicants have amended the claims so as to define all the nucleotide sequences of the claims in relation to particular sequences disclosed in the specification as SEQ ID NOs. However, Applicants reiterate that they believe that the claims as previously submitted described the invention so as to meet the enablement and written description requirements. The invention involves the use of the novel third nucleotide sequences and their encoded proteins in conjunction with enzymes having fumonisin esterase activity or amine oxidase activity such as those previously described and cited in the specification. Because the enzymes having fumonisin esterase activity or amine oxidase activity were previously described and known in the art, Applicants believe that the description of those sequences as previously claimed met the written description requirement. See, e.g., *Amgen, Inc. v. Hoechst Marion Roussel*, 314 F.3d 1313, 65 USPQ2d 1385 (Fed. Cir. 2003) (noting that the written description requirement may be satisfied if the disclosed function is sufficiently correlated to a particular structure known in the art).

Nevertheless, in order to advance prosecution, Applicants have amended the claims as suggested by the Examiner. Applicants therefore respectfully submit that the claims meet the requirements for patentability and should be allowed.

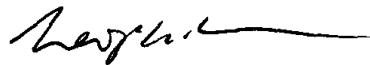
CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance. Early notice to this effect is solicited.

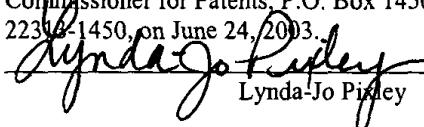
If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject Application, the Examiner is invited to call the undersigned.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those, which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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| <p>CUSTOMER NO. 29122 ALSTON & BIRD LLP Bank of America Plaza 101 South Tryon Street, Suite 4000 Charlotte, NC 28280-4000 Tel Raleigh Office (919) 862-2200 Fax Raleigh Office (919) 862-2260</p> | <p>"Express Mail" mailing label number EV 185285215 US Date of Deposit June 24, 2003 I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 24, 2003.  Lynda-Jo Pixley</p> |
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